REMARKS

After entry of this amendment, claims 1, 4-6, 8-12, 15, 18-21, and 32-43 are pending. In the present Office Action, claims 33 and 35 were rejected under 35 U.S.C. § 112, first paragraph. Claims 1, 4-12, 14-15, 18-21, and 32-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xu in view of what would have been obvious to one of skill in the art. Applicants respectfully traverse these rejections and request reconsideration.

Claims 1, 4-6, 8-12, 15, 18-21, and 32-36

Applicants respectfully submit that each of claims 1, 4-6, 8-12, 15, 18-21, and 32-36 recite combinations of features not taught or suggested in Xu. For example, claim 1 recites a combination of features including "said computing node is configured to transmit an access command to said storage to close said file, and wherein said storage is configured to transmit an indication to said metadata server including said first file identifier to inform said metadata server of said file being closed".

The present Office Action alleges that Xu teaches a command to close a file that was "communicated among all the client node, the metadata server, and the storage device" at col. 17, line 36-col. 18, line 44 (see Office Action, page 5, second half of first paragraph). Applicants respectfully submit that the teachings at col. 17, line 36-col. 18, line 44 regarding a command to close a file do not teach or suggest the above highlighted features of claim 1. Xu teaches an SMB_COM_CLOSE request as follows: "In an SMB_COM_CLOSE request, the client requests the file represented by Tid and Fid to be closed. The Forwarder transparently passes this request to the Owner. The Owner responds with a success code. The Forwarder receives the response from the Owner, and forwards the response to the client." (Xu, col. 18, lines 1-6). Additionally, Xu teaches "A data mover that receives a file access request from a client and forwards the file access request will be referred to as a Forwarder, and the data mover that owns the file system to be accessed will be referred to as the Owner." (Xu, col. 13, lines 13-16). Thus, the Forwarder and the Owner referred to above are both data movers. That is, Xu teaches a

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client transmitting an SMB_COM_CLOSE request to a first data mover, which forwards the request to a second data mover. The second data mover responds to the first data mover, which forwards the response to the client. This does not teach or suggest "said computing node is configured to transmit an access command to said storage to close said file, and wherein said storage is configured to transmit an indication to said metadata server including said first file identifier to inform said metadata server of said file being closed". Neither data mover is a storage, and the storage (various cached disk arrays in Xu's Figs. 1-4, according to the Office Action) is apparently not involved in an SMB_COM_CLOSE request as taught in the cited section of Xu.

Additionally, Applicants respectfully note that, even if Xu did teach a command to close a file that was "communicated among all the client node, the metadata server, and the storage device", that would still not teach or suggest "said computing node is configured to transmit an access command to said storage to close said file, and wherein said storage is configured to transmit an indication to said metadata server including said first file identifier to inform said metadata server of said file being closed". Teachings that might broadly describe communicating a command among various devices do not teach or suggest a specific communication such as an access command transmitted from the computing node to the storage, and the storage transmitting an indication to the metadata server to inform the metadata server that the file is closed.

For at least the above stated reasons, Applicants submit that claim 1 is patentable over the cited art. Claims 4-6, 8-12, 32-33, and 36 depend from claim 1 and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 4-6, 8-12, 32-33, and 36 recite additional combinations of features not taught or suggested in the cited art.

Claim 15 recites a combination of features including "said computing node transmitting an access command to said storage to close said file; and said storage transmitting an indication to said metadata server including said first file identifier to inform said metadata server of said file being closed". The teachings of Xu, highlighted

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above, do not teach or suggest the combination of features recited in claim 15, either. Accordingly, Applicants submit that claim 15 is patentable over the cited art. Claims 18-21 and 34-35, being dependent from claim 15, are similarly patentable over the cited art for at least the above stated reasons. Each of claims 18-21 and 34-35 recite additional combinations of features not taught or suggested in the cited art.

<u>Section 112 Rejection</u>

The Office Action rejected claims 33 and 35 for alleged lacking written description in the specification. Particularly, the Office Action alleged that "said storage is configured to detect direct accesses by said computing node to said storage on said interconnect using said device identifier" is not supported in the specification. Applicants respectfully disagree. The above features are supported throughout the specification. For example, page 12, lines 24-26 state "Alternatively, interconnect 20 may be a shared communication medium in which commands are visible to all devices and <u>the device ID may be used by the storage 12A to detect commands directed at the device</u>." The commands are described as one form of a client directly accessing a storage, e.g.: "The requesting client 10A-10C the performs various read and write commands directly to the storage 12A-12C identified by the device ID." (Specification, page 4, lines 25-26). Accordingly, Applicants submit that claims 33 and 35 meet the requirements of 35 U.S.C. § 112.

<u>New Claims</u>

Applicants respectfully submit that new claims 37-43 each recite a combination of features not taught or suggested in Xu. For example, claim 37 recites a combination of features including: "a metadata server ... configured to provide, responsive to said request: (i) at least a first file identifier corresponding to said file... (ii) a device identifier identifying said storage on an interconnect to which at least said computing node and said storage are coupled; and (iii) an access key assigned by said metadata server to said computing node for said file; wherein <u>said metadata server is further configured to provide said access key to both said storage and said computing node</u>; and wherein said computing node is coupled to receive said first file identifier, said access

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key, and said device identifier for directly accessing said storage on said interconnect, and wherein <u>said computing node is configured to transmit an access command to said storage to access said file, and wherein said access command includes said first file identifier, said device identifier, and said access key, and wherein said storage is configured to verify access by said computing node to said file using said access key</u>." Claims 38-43 depend from claim 37 and recite additional combinations of features not taught or suggested in Xu.

CONCLUSION

Applicants submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-59700/LJM.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Request for Approval of Drawing Changes

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $

for fees (   ).

☐ Other:

Respectfully submitted,

Lawrence J. Merkel
Reg. No. 41,191
AGENT FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800

Date: 12/13/04